

**UNITED STATES PATENT AND TRADEMARK OFFICE**  
(Case No. 97-022-F3)

**PATENT**

IN THE APPLICATION OF:	)	
	)	
<b>R. Terry Dunlay, <i>et al.</i></b>	)	
	)	
Serial No.	)	Examiner: <b>Smith, Carolyn L.</b>
Filed:	)	Group Art Unit: <b>1631</b>
	)	
Title	)	Confirmation No.: <b>5398</b>
	)	

**APPELLANTS' REPLY BRIEF IN SUPPORT OF THE  
APPEAL TO THE BOARD OF PATENT APPEAL AND INTERFERENCES**

Dear Sir:

This Reply Brief is submitted in accordance with the requirements of 37 C.F.R. 41.41(a)(1) and 41.43(b). No fee is believed due in connection with this filing. However, if additional fees are due the Commissioner is authorized to charge our deposit account number 13-2490.

## ***I. Introduction***

The Examiner's Answer mailed December 3, 2007, fails to rebut the points of clear error identified in Applicant's Amended Appeal Brief.

In the Answer, the Examiner appears to have copied much of the text of the final office action. Following that text, the Examiner then set forth on page 6-12 a "Response to Argument" section, in which the Examiner commented on Applicant's arguments. This Reply Brief addresses the specific points set forth in the "Response to Argument" section of the Examiner's Answer.

## ***II. Status of Claims***

Claims 13-18 and 23-25 are pending in this application and are being appealed. Of these claims, claim 13 is independent. A clean set of the pending claims is attached in the Claims Appendix beginning at page 17. As indicated in the Claims Appendix, claims 1-12 and 19-22 are cancelled.

Claims 13-18 and 23-25 were finally rejected in the Office Action mailed November 6, 2006, and Applicants received an Advisory Action, mailed January 30, 2007. A Notice of Appeal was mailed via Express Mail with a certificate of mailing on February 15, 2007. This Appeal Brief is being filed within five months of the filing of the Notice of Appeal and is accompanied by the proper request for an extension of time for three months accompanied by the required fee.

## ***III. Grounds of Rejection to be Reviewed on Appeal***

1. Whether claims 13-18 and 23-25 are unpatentable under 35 U.S.C. § 102(e)(2) over Patent No. 5,961,923, (hereinafter, "Nova").

## ***IV. Argument***

There is only one remaining rejection of claims 13-18 and 23-25 under 35 U.S.C. § 102(e)(2) as anticipated over Nova.

Applicants respectfully assert that the Patent Office's rejection does not meet the statutory standard required for an anticipation rejection. The reasons supporting patentability are set forth below.

**A. The Office Erred in Rejecting Claims 13-18 and 23-25 as being Anticipated over Nova *et al.***

Claims 13-18 and 23-25 stand rejected as anticipated over Nova. For the following reasons, the Applicants respectfully traverse.

Applicants' detailed arguments as to why Nova et al is not a proper anticipatory reference and does not teach or disclose all of the claim limitations are provided in the Appeal Brief filed August 13, 2007.

As argued by Applicants in the Appeal Brief filed August 13, 2007 and the previous Office Action responses, Nova et al does not teach or disclose collecting **subcellular image data from the cells** (i.e. within the cells) in the wells (as required in pending claim 13(c)(ii)), nor, as a result, any further steps involving subcellular image data: (ie:

- collecting feature data from the subcellular image data (c)(ii);
- storing subcellular image data (c) (iii);
- calculating well summary data from the subcellular image data and feature data (c)(vi); and
- calculating plate summary data from the well summary data (c)(vii),

as recited in the presently pending claims.

In the Answer, the Examiner has merely listed and paraphrased the passages of Nova et al.; the Examiner has not responded to any of the Applicants' specific arguments and has provided no new evidence that Nova et al teach or suggest collecting **subcellular image data from within cells** as recited in the instant claims.

In particular, the Examiner has misstated the Applicants argument regarding the definition of sub-cellular image data. The Applicants clearly stated in the Appeal Brief filed August 13, 2007 that "the Patent Office asserts that 'subcellular image data' is defined as anything involving subcellular and image data (i.e. data from labeled protein detected using a photodetector)." The arguments provided by the Examiner assert that image data of any molecule which may have, at one point, been in a cell, but is no longer in a cell, qualifies as sub-cellular image data. However, the claims clearly recite "sub-cellular image data from the cells." Thus the image data must be from within the cell not just of a once sub-cellular molecule that is no longer located inside a cell.

The Examiner states that the term "sub-cellular image data" has been "interpreted

broadly and reasonably” based upon the specification which “recites cytoplasmic region and nuclear region as two-sub-cellular compartments and measuring translocation.” Thus, the Examiner clearly recognizes, based upon the specification, that “subcellular image data” is image data from within cells. Therefore, it is clear from the claims and the specification that the recited “sub-cellular image data from the cells” is intracellular image data collected from within the cell. However the Examiner does not appear to use this definition in evaluating the teachings of Nova et al. The Examiner repeatedly references passages from Nova et al. which teach collecting image data from tagged and labeled molecules which are located extracellularly and attached to matrices and other extracellular solid phase supports. Thus, according to the definition provided by the Examiner, Nova et al does not teach all of the claim limitations of the instant claims because Nova et al does not teach image data from within the cell.

In the Answer, the Examiner repeatedly, and for the first time, makes reference to Nova et al teaching “cell-based assays,” however, the only support provided for this assertion is a single line from col. 95, line 25, which is a section heading and which states in its entirety “Cell-based Assays.” The entire section below this heading provides no specific teaching or suggestion of specific cell-based assays in which subcellular image data from within cells is collected and thus does not teach or suggest the claim limitations recited in the instant claims. The mere inclusion of the phrase “cell-based assays” is in no way a disclosure by Nova et al. of “collecting sub-cellular image data from the cells” as no specific intra-cellular assays are taught or suggested by Nova et al.

In the Answer, the Examiner has also, for the first time cited col. 97, line 35 to col. 98, line 60. Applicants note that this section speaks to nothing but various formats for growing and culturing cells, including plates and cell culture conditions, and generically states that one can study all types of biological molecules. This section also provides no specific teaching of collecting intracellular image data and thus does not teach or suggest “collecting sub-cellular image data from the cells” are recited in the instant claims.

All other passages of Nova et al cited by the Examiner were specifically addressed in the Applicants’ Appeal Brief filed August 13, 2007. The Examiner has provided no new evidence or arguments and has cited no specific passage that

demonstrate Nova et al teach or suggest all of the claim limitations of independent claim 13 or any of the dependent claims.

Given that Nova provides absolutely no teaching or disclosure of generating **any** subcellular image data from within the cells, the Nova et al reference clearly is not a proper anticipatory reference for claim 13, nor for any of the claims 14-18 and 23-25 which are dependent on claim 13 and which recite further limitations.

## **B. Conclusion**

In summary, the presently claimed methods cannot be anticipated by Nova because Nova does not teach all the elements of the presently pending claims. The Examiner's Answer has provided no new evidence or support for the assertions that Nova et al teach or suggest all of the claim limitations of the instant claims. Nova provides no express or inherent disclosure regarding collecting subcellular image data from within the cells or other limitations that require use of the collected subcellular image data. Accordingly, the Applicants respectfully submit that this rejection is improper.

Date: February 1, 2008

Respectfully Submitted,

/David S. Harper/

**David S. Harper, Ph.D.**  
**Registration No. 42,636**

McDonnell Boehnen  
Hulbert & Berghoff LLP  
300 South Wacker Drive, 31<sup>st</sup> Floor  
Chicago, IL 60606

Telephone: 312.913.0001  
Facsimile: 312.913.0002